



# The Cathedral & The Bazaar revisited






**Librarian Union Catalogues and Federated WWW  
Information Services**

**Dr. Stefan Gradmann**

**Virtual Campus Library@Hamburg University  
computing Centre**

**[stefan.gradmann@rrz.uni-hamburg.de](mailto:stefan.gradmann@rrz.uni-hamburg.de)**

# Le Menu

-  **Apéritif:** Clarify objectives & scope of the paper
-  **Hors d'oeuvre:** Illustrate motivation
-  **Pièce de résistance:** Differing basic elements and concepts (entities, pointers – including OPAC vs. „OPAW“ -, identity)
-  **Dessert:** Differing modes of collaboration (The cathedral & the bazaar)
-  **Fromage:** Modes of coexistence: future choices and bridging concepts

# Clarify objectives & scope

- ☐ **Some words on my personal background**
  - ☐ **Union Cataloguing**
  - ☐ **Academic E-Publishing**
  - ☐ **VCB as hybrid, campus wide information framework**

☐ **And on**  **vs.** 

- ☐ **Do these converge, compete, coexist? Much projections and bad library science fiction has been around**

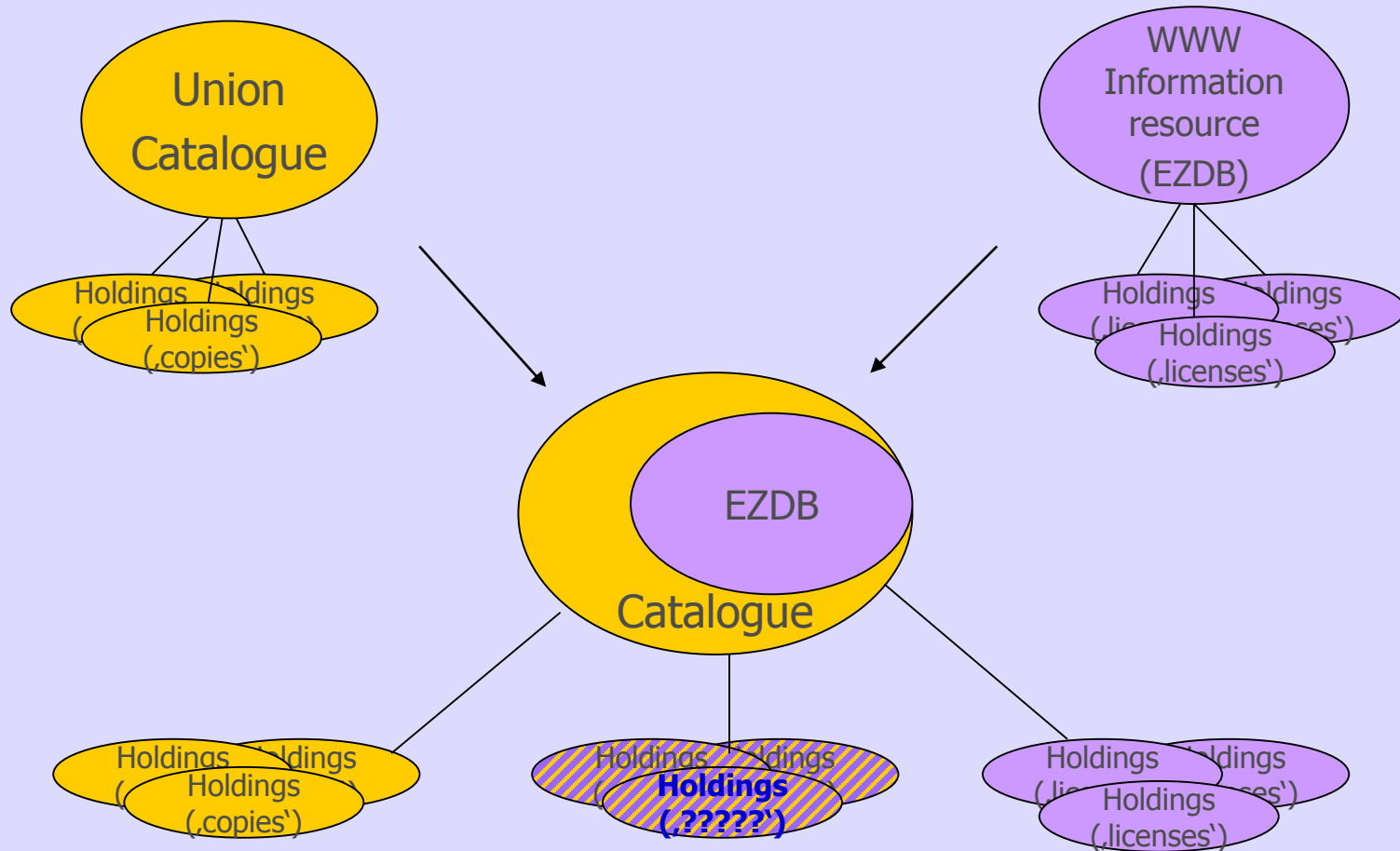
- ☐ **Basic assumptions:**

- ☐ **We know very little, much less than we sometimes (have to) suggest, especially in political contexts**
- ☐ **Differences matter, simplifying and pragmatism do not always help!**
- ☐ **Paper is well aware of its specific audience and thus presented from a librarian perspective**

# Motivation: Pitfalls of pure pragmatism I



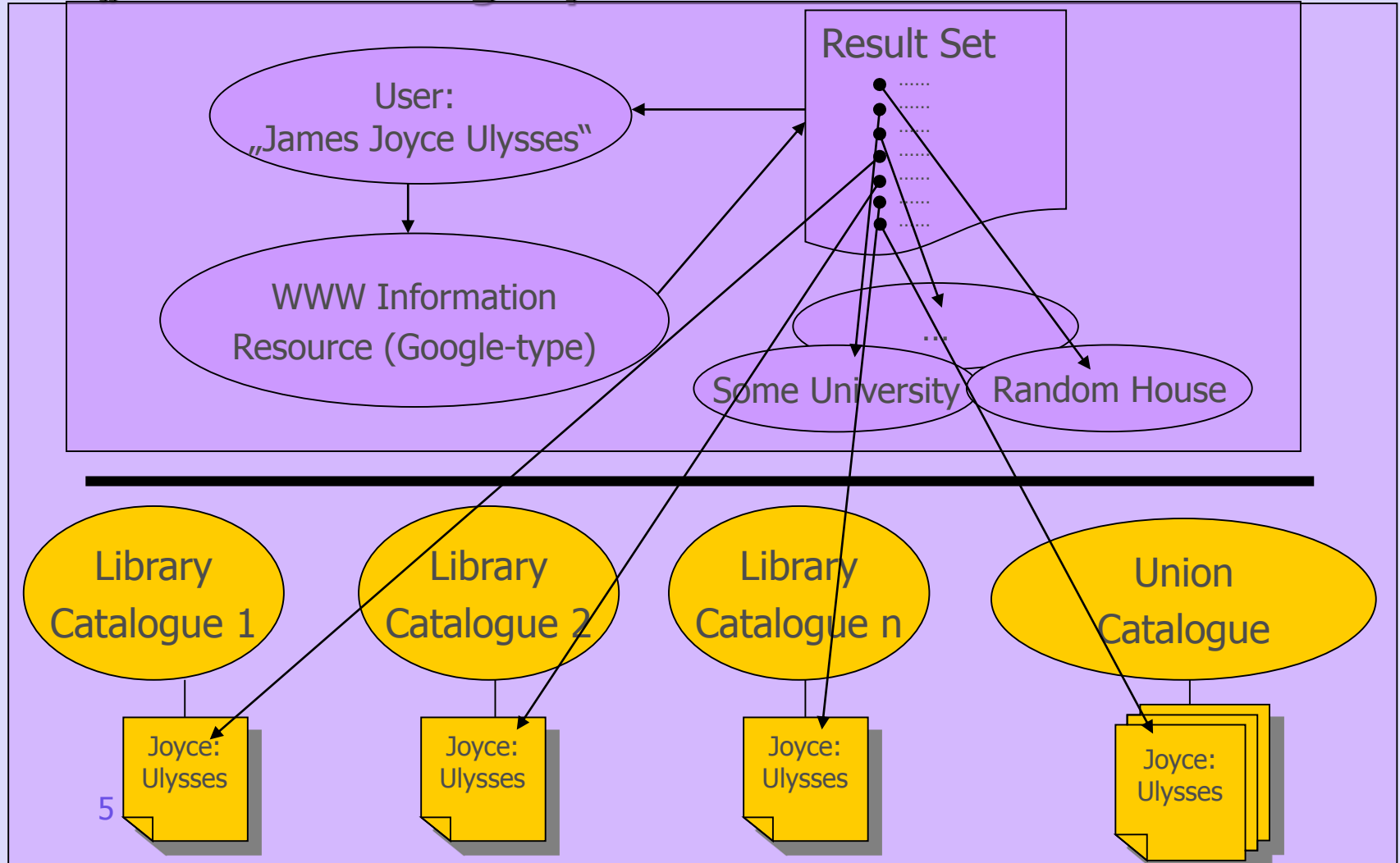
„Make the WWW part of the catalogue“



# Motivation: Pitfalls of pure pragmatism II

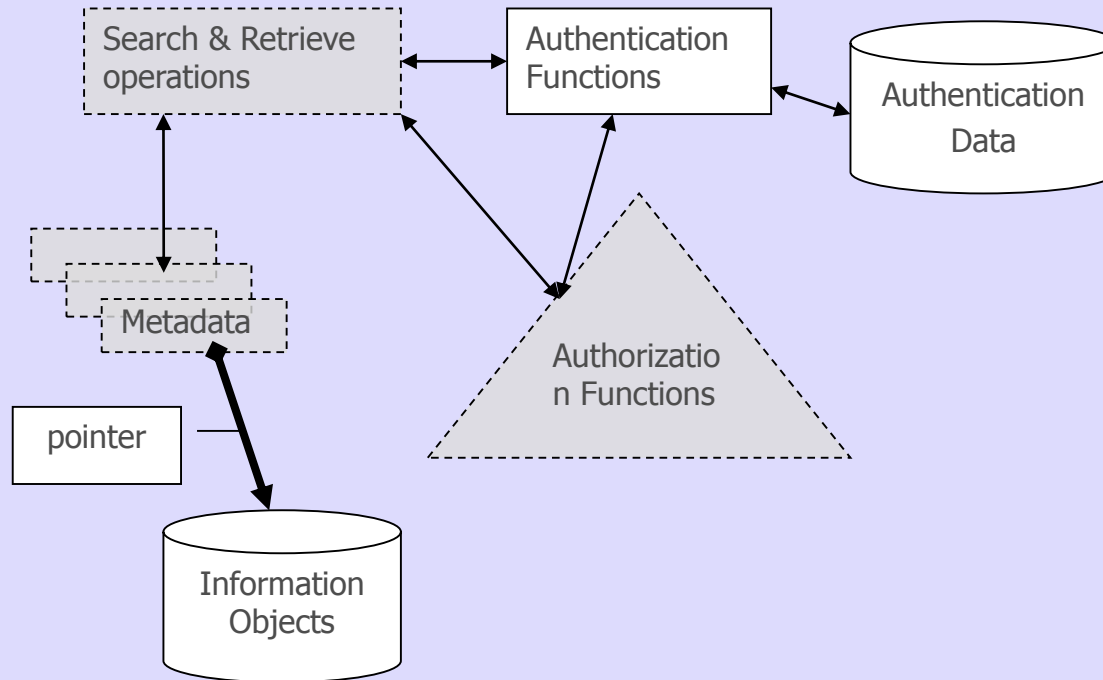


**„Make the catalogue part of the WWW“**









# Differing basic elements and concepts

The bird's perspective:



- ☐ **Relatively similar: metadata** (even though catalogers will not like this idea) and **search & retrieval** operations (for 'historical' reasons)
- ☐ **More fundamentally differing: information entities, pointers, authentication**

# Basic entities: ‚books‘ vs. electronic information objects

-  **‚Digital Libraries‘ and ‚E-Books‘ are profoundly misleading (even though temporarily necessary) metaphors: books/book-like objects differ fundamentally from born digital objects ...**
-  **... even though seemingly trivial, the distinction is richer in implications than we usually are aware of**
-  **3 Examples**
  -  **E. g. relation storage – presentation**
  -  **E.g. device based vs. device independent access**
  -  **E. g. pre- vs. post-processing/structuring (think about TOC, indexes and the like!)**

# Pointers: the basic mechanism

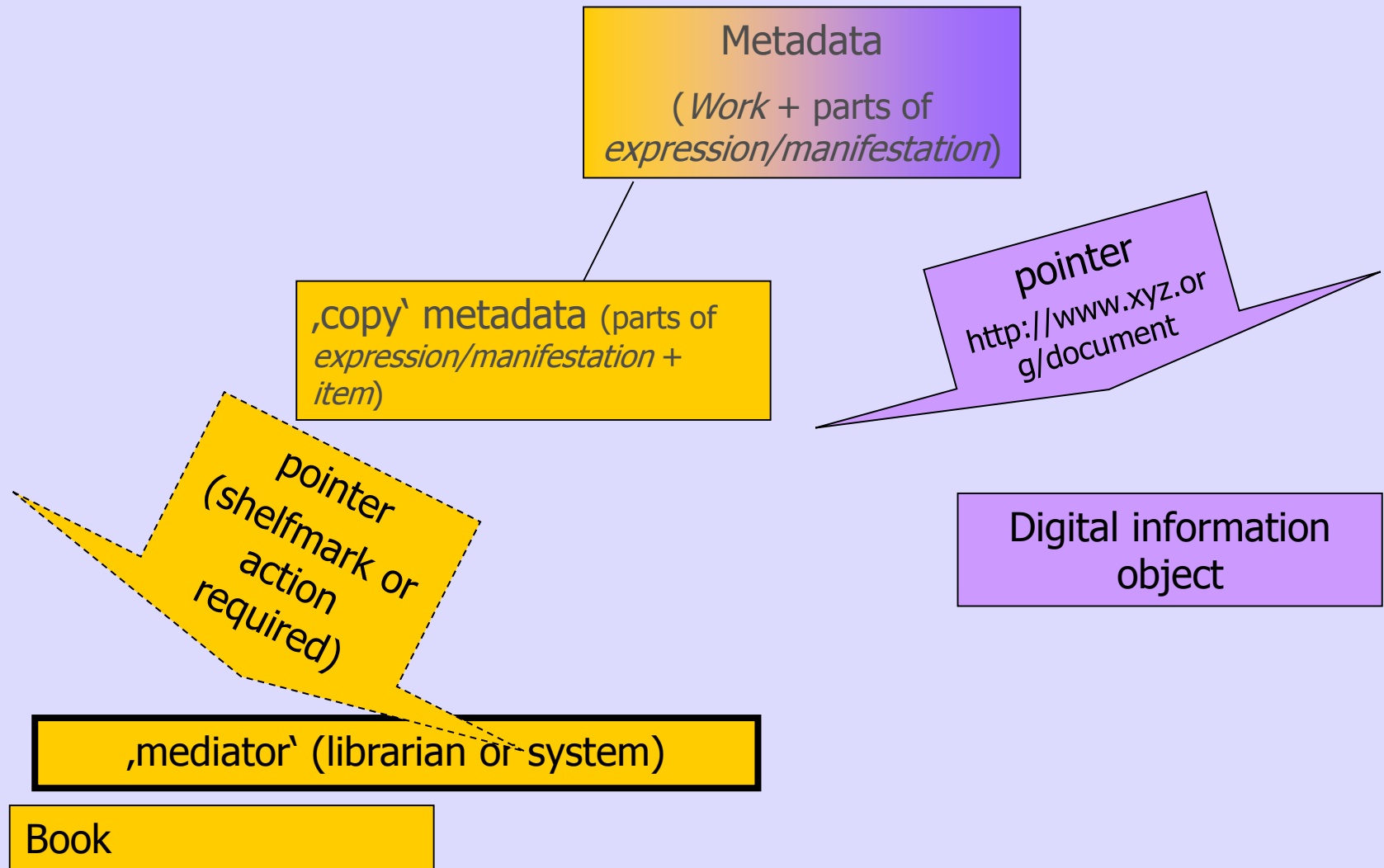
Metadata  
(Descriptive,  
identifying,  
administrative)

Pointer  
(e. g.  
shelfmark or  
<http://www....>  
)

Information objects  
(Books, electronic files etc.)



# Pointers: direct vs. mediated access



# Pointers: OPAC vs. „OPAW“



## **OPAC (Online Public Access Catalogue)**



Shelfmarks



Human interpretation



Objects physically present



Mediated access



Erroneous pointer: can be corrected intellectually



„Weak“ pointer



Uncritical component

## **OPAW (Online Public Access Website)**

URL-Pointer

Machine interpretation

Objects not physically present

Direct access









Erroneous pointer : Error 404

„Strong“ pointer

Critical component

# Identity and credentials: authentication and authorization

## **'Real' Life environments**

-  **WHO:** ID-Card/Passport
  -  Photograph/human presence
-  **WHAT OPERATION:**  
lending, copying
-  **WHERE:** library location
  -  User location (address)
-  **WHICH CONTEXT:** 'lending',  
'reading' – anything else?
-  **LEVEL OF TRUST:** flexible ...
-  **Uncritical** factor

## **Digital environment**

Various IDs / 'passports' (M\$)

'Digital' presence

'access' – for doing what?

IP-Address? DNS??











see above ...

'online', 'subscribed', 'read', 'write',  
'annotate'...

binary: none or all

**Critical** (potentially blocking) factor

# The cathedral & The bazaar

-  **Differing modes of collaboration**
  -  **Rule based vs. Protocol based**
  -  **Prescriptive vs. Experimental**
  -  **Pre-coordinated vs. Post-coordinated**
-  **Differing modes of communication**
  -  **Hierarchical vs. Flat**
  -  **Channeled vs. broadband**
  -  **Aggregation vs. distribution**
-  **Differing modes of perception / mental organization**
  -  **Identity vs. difference ... stop before definitely entering the taboo area of philosophical speculations!**

# Modes of coexistence: future choices and bridging concepts






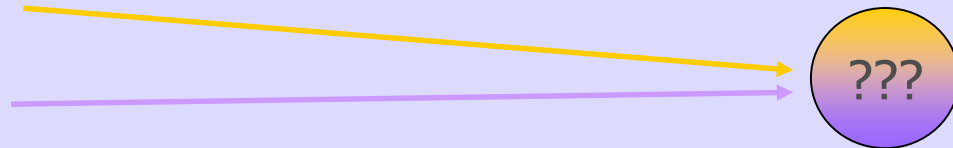
## Basic assumptions

-  **Coexistence will be an issue for quite some time!**
-  **Real choices can actually be made!**

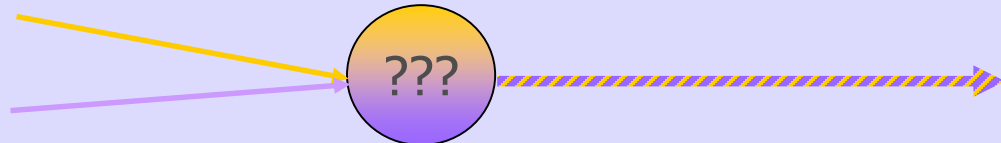


## 4 scenarios:

-  **Redundancy: reality, but expensive and inefficient**
-  **Competition: reality (alas) but not really appropriate**
-  **Convergence:**







-  **Integration**



**Choices will mostly be triggered by strong external factors (money, politics, economic interest), but some inherent factors can be influenced by the library and WWW communities themselves**

# Bridging concepts: FRBR and Semantic Web

-  **Semantic Web: combine librarian semantic granularity, accuracy and authority control and XML-based automated semantic operations**
-  **FRBR: Render librarian and internet data structures and pointers compatible by establishing unified concepts of what semantic entities, expressions/manifestations and item derivatives are**
-  **Thank you for your patience and attention**
-  **Questions? Wait for Saturday and/or <mailto:stefan.gradmann@rrz.uni-hamburg.de>**